Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An information recording processing device ~~characterized by~~ comprising:

a modulated data generating unit for generating a modulated recording frame by performing data modulation processing on data to be recorded;

recording frame characteristic determining means for determining a data characteristic of constituent data of an additional data-corresponding recording frame, wherein said data characteristic represents a state obtained from said additional data-corresponding recording frame; and

an additional data-corresponding data controlling unit for controlling constituent bits of a data-changeable data part on a basis of:

(i) a constituent bit value of additional data; and

(ii) the data characteristic of the constituent data of said additional data-corresponding recording frame.

Claim 2 (previously presented): The information recording processing device as claimed in claim 1,

wherein in said additional data-corresponding data controlling unit, the data part whose constituent bits are controlled is user control data (UCD).

Claim 3 (previously presented): The information recording processing device as claimed in claim 1,

wherein the data characteristic of the constituent data of said additional data-corresponding recording frame is a characteristic of whether parity of the constituent data of the recording frame is even parity or odd parity, and

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said additional data-corresponding data controlling unit controls the constituent bits of the data-changeable data part on a basis of two conditions of whether the constituent bit value of said additional data is 0 or 1 and whether the parity of the constituent data of said additional data-corresponding recording frame is even parity or odd parity.

Claim 4 (previously presented): The information recording processing device as claimed in claim 1,

wherein said additional data-corresponding data controlling unit performs control to set parity of the data-changeable data part to one of odd parity and even parity.

Claim 5 (previously presented): The information recording processing device as claimed in claim 1,

wherein said additional data is set as constituent information of at least one of encryption key information, encryption key generating information, content reproduction control information, and content copy control information for contents stored on said information recording medium.

Claim 6 (previously presented): The information recording processing device as claimed in claim 1,

wherein said modulated data generating unit generates the modulated recording frame by performing a data conversion process satisfying RLL (1, 7) as a run length rule.

Claim 7 (previously presented): The information recording processing device as claimed in claim 1,

wherein said modulated data generating unit performs a modulated recording frame generating process including a process of conversion of two-bit information into three-bit information.

Claim 8 (currently amended): An information reproduction processing device for reproducing information stored on an information recording medium, said information reproduction processing device ~~characterized by~~ comprising:

a demodulating unit for demodulating data read from the information recording medium; and

an additional data decoding unit for:

(a) determining <u>a first</u> data <u>characteristic</u> ~~characteristics~~ of an additional data-corresponding recording frame, <u>wherein said first data characteristic represents a state obtained from said additional data-corresponding recording frame;</u> ~~and~~

<u>(b) determining a second data characteristic of a</u> specific user control data read from the information recording medium~~;~~ <u>; and</u>

<u>(c)</u> obtaining additional data constituent bit information on a basis of<u>:</u>

<u>(i)</u> said <u>first</u> ~~the two~~ determined data <u>characteristic which represents the state</u> <u>obtained from said additional data-corresponding recording frame; and</u> ~~characteristics.~~

<u>(ii) said second determined data characteristic of said specific user control data.</u>

Claim 9 (previously presented): The information reproduction processing device as claimed in claim 8,

wherein in said additional data decoding unit, a data part whose data characteristic is determined is user control data (UCD).

Claim 10 (currently amended): The information reproduction processing device as claimed in claim 8,

wherein the <u>first</u> data characteristic of constituent data of said additional data-corresponding recording frame is a characteristic of whether parity of the constituent data of the recording frame is even parity or odd parity, and

said additional data decoding unit obtains the additional data constituent bit information on a basis of two data characteristic determinations of whether the parity of the constituent data

of said additional data-corresponding recording frame is even parity or odd parity and whether parity of constituent data of the specific user control data is even parity or odd parity.

Claim 11 (previously presented): The information reproduction processing device as claimed in claim 8,

wherein at least one of encryption key information, encryption key generating information, content reproduction control information, and content copy control information for contents stored on said information recording medium is generated on a basis of the obtained additional data constituent bit information.

Claim 12 (currently amended): An information recording medium storing:

modulated data based on a plurality of recording frames; and

user control data having a data characteristic determined on a basis of:

(i)   a constituent bit value of additional data; and

(ii)   a data characteristic of constituent data of a specific additional data-corresponding recording frame selected from the plurality of recording frames, wherein said data characteristic represents a state obtained from said specific additional data-corresponding recording frame.

Claim 13 (previously presented): The information recording medium as claimed in claim 12,

wherein the data characteristic of the constituent data of said additional data-corresponding recording frame is a characteristic of whether parity of the constituent data of the recording frame is even parity or odd parity, and

said user control data has the data characteristic determined according to two conditions of whether the constituent bit value of said additional data is 0 or 1 and whether the parity of the constituent data of said additional data-corresponding recording frame is even parity or odd parity.

Claim 14 (previously presented): The information recording medium as claimed in claim 12,

wherein the data characteristic determined for said user control data is a data characteristic of whether parity of constituent data of said user control data is even parity or odd parity, and

the user control data having the parity determined on a basis of the constituent bit value of said additional data and the data characteristic of the constituent data of the specific additional data-corresponding recording frame selected from said plurality of recording frames is stored.

Claim 15 (previously presented): The information recording medium as claimed in claim 12,

wherein said additional data is stored as constituent information of at least one of encryption key information, encryption key generating information, content reproduction control information, and content copy control information for contents stored on said information recording medium.

Claim 16 (previously presented): The information recording medium as claimed in claim 12,

wherein the data based on a modulated recording frame generated by performing a data conversion process satisfying RLL (1, 7) as a run length rule is recorded.

Claim 17 (previously presented): The information recording medium as claimed in claim 12,

wherein the data based on a modulated recording frame generated by performing a process of converting two-bit information into three-bit information is recorded.

Claim 18 (currently amended): An information recording processing method comprising:

an additional data-corresponding data controlling step of controlling constituent bits of a data-changeable data part on a basis of:

      (i)   a constituent bit value of additional data; and

      (ii)   a data characteristic of constituent data of an additional data-corresponding recording frame, wherein said data characteristic represents a state obtained from said additional data-corresponding recording frame; and

a modulated data generating step of generating a modulated recording frame by performing data modulation processing on data to be recorded.

Claim 19 (previously presented): The information recording processing method as claimed in claim 18,

wherein in said additional data-corresponding data controlling step, the data part whose constituent bits are controlled is user control data (UCD).

Claim 20 (previously presented): The information recording processing method as claimed in claim 18,

wherein the data characteristic of the constituent data of said additional data-corresponding recording frame is a characteristic of whether parity of the constituent data of the recording frame is even parity or odd parity, and

said additional data-corresponding data controlling step controls the constituent bits of the data-changeable data part on a basis of two conditions of whether the constituent bit value of said additional data is 0 or 1 and whether the parity of the constituent data of said additional data-corresponding recording frame is even parity or odd parity.

Claim 21 (previously presented): The information recording processing method as claimed in claim 18,

wherein said additional data-corresponding data controlling step performs control to set parity of the data-changeable data part to one of odd parity and even parity.

Claim 22 (previously presented):   The information recording processing method as claimed in claim 18,

wherein said additional data is constituent information of at least one of encryption key information, encryption key generating information, content reproduction control information, and content copy control information for contents stored on said information recording medium.

Claim 23 (previously presented):   The information recording processing method as claimed in claim 18,

wherein said modulated data generating step generates the modulated recording frame by performing a data conversion process satisfying RLL (1, 7) as a run length rule.

Claim 24 (previously presented):   The information recording processing method as claimed in claim 18,

wherein said modulated data generating step performs a modulated recording frame generating process including a process of conversion of two-bit information into three-bit information.

Claim 25 (currently amended):   An information reproduction processing method for reproducing information stored on an information recording medium, said information reproduction processing method ~~characterized by~~ comprising:

a demodulating step of demodulating data read from the information recording medium; and

an additional data decoding step of determining a first data characteristic ~~characteristics~~ of an additional data-corresponding recording frame, wherein said first data characteristic represents a state obtained from said additional data-corresponding recording frame; and

determining a second data characteristic of a specific user control data read from the information recording medium; ~~and~~

obtaining additional data constituent bit information on a basis of the two determined data characteristics.

Claim 26 (previously presented): The information reproduction processing method as claimed in claim 25,

wherein in said additional data decoding step, a data part whose data characteristic is determined is user control data (UCD).

Claim 27 (currently amended): The information reproduction processing method as claimed in claim 25,

wherein the first data characteristic of constituent data of said additional data-corresponding recording frame is a characteristic of whether parity of the constituent data of the recording frame is even parity or odd parity, and

said additional data decoding step obtains the additional data constituent bit information on a basis of two data characteristic determinations of whether the parity of the constituent data of said additional data-corresponding recording frame is even parity or odd parity and whether parity of constituent data of the specific user control data is even parity or odd parity.

Claim 28 (previously presented): The information reproduction processing method as claimed in claim 25, further comprising a step of generating at least one of encryption key information, encryption key generating information, content reproduction control information, and content copy control information for contents stored on said information recording medium on a basis of the obtained additional data constituent bit information.

Claim 29 (currently amended): An information recording medium storing a ~~A~~ computer program for performing an information recording process, said computer program structured to cause an apparatus to: ~~comprising:~~

control ~~an additional data-corresponding data controlling step of controlling~~ constituent bits of a data-changeable data part on a basis of:

(i)   a constituent bit value of additional data; and

(ii)   a data characteristic of constituent data of an additional data-corresponding recording frame, wherein said data characteristic represents a state obtained from said additional data-corresponding recording frame; and

generate ~~a modulated data generating step of generating~~ a modulated recording frame by performing data modulation processing on data to be recorded.

Claim 30 (currently amended): An information recording medium storing a ~~A~~ computer program for reproducing information stored on an information recording medium, said computer program structured to cause an apparatus to: ~~comprising:~~

demodulate ~~a demodulating step of demodulating~~ data read from the information recording medium; and

determine:

(i) a first ~~an additional data decoding step of determining~~ data characteristic ~~characteristics~~ of an additional data-corresponding recording frame, wherein said data characteristic represents a state obtained from said additional data-corresponding recording frame; and

(ii) a second data characteristic of a specific user control data read from the information recording medium; ~~; and obtaining~~

obtain additional data constituent bit information on a basis of the two determined data characteristics.